

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

Facility Name: RMI Titanium Company-Sodium Plant
Facility Address: 600 East State Road, Ashtabula, Ohio 44004-0550
Facility EPA ID #: OHD 000810242

1. Has all available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

☒ If yes - check here and continue with #2 below.

☐ If no - re-evaluate existing data, or

☐ if data are not available skip to #6 and enter "IN" (more information needed) status code.

US EPA RECORDS CENTER REGION 5



1009078

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

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2. Are groundwater, soil, surface water, sediments, or air media known or reasonably suspected to be "contaminated"¹ above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	Yes	No	?	Rationale / Key Contaminants
Groundwater	✓	—	—	Barium, Cadmium
Air (indoors) ²	—	✓	—	
Surface Soil (e.g., <2 ft)	✓	—	—	Arsenic, Barium, Cadmium, Lead
Surface Water	✓	—	—	Barium, Cadmium
Sediment	✓	—	—	Barium, Cadmium
Subsurf. Soil (e.g., >2 ft)	✓	—	—	Barium, Cadmium
Air (outdoors)	—	✓	—	

— If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

✓ If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

— If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s): Eleven potential solid waste management units (SWMUs) were listed in *Work Plan for RCRA Facility Investigation RMI Sodium Plant Ashtabula, Ohio, June 1987 Revision No. 2*, prepared by Aware Incorporated for RMI Company.

The potential SWMUs were:

- Abandoned pond east of closed landfill
- Sulfuric acid neutralization tanks
- South chute waste pile, permitted RCRA unit
- Burning room, permitted RCRA unit
- Closed landfill
- Five wastewater treatment ponds
- Fill area in the vicinity of the wastewater treatment ponds
- Fill area west of wastewater treatment ponds
- Fill area north of wastewater treatment ponds
- Fill area northeast of closed landfill
- Fill area northwest of closed landfill

The Abandoned Pond East of the Closed Landfill was constructed in 1956 and was used for holding leach brine (from solution mining operations) pumped from Electromet which was a facility located to the east of RMI. The solution mining produces a fortified salt brine which was used as a Sodium Plant feed stock. It was abandoned in 1957 to 1958 when Electromet was closed. This pond was also used as a holding pond for leach brine in 1981 while the No.2 East Brine Pond was being constructed. This occurred during a six month period. Upon completion of the No.2 brine pond, this pond was emptied of brine and abandoned. In the late 1990's, the pond sediment was excavated and disposed of in an approved landfill. After excavation, the pond was backfilled and leveled to grade. This area was confirmed not to be a SWMU, based upon RMI's CERCLA Section 104(e) (Certification Regarding Potential Releases From Solid Waste Management Units) response submitted in 1986. This pond, as well as the No.2 East Brine Pond, were Manufacturing Process Units. The brine ponds have never contained waste materials or known hazardous constituents.

The Sulfuric Acid Neutralization System consisted of an above ground sulfuric acid storage tank and a concrete neutralization pit. In this unit, waste sulfuric acid from the chlorine pumping and chlorine liquefaction operations are neutralized. The waste was hazardous due solely to the characteristic of corrosivity. The neutralization system involves treatment in concrete tanks as part of the National Pollutant Discharge Elimination System (NPDES) treatment at the Sodium Plant. There have been no known releases from these tanks. This system was removed during the decommissioning of the facility.

The South Chute Waste Pile received only cell bath wastes. These wastes were sometimes characteristically toxic for barium, cadmium, and/or lead. The South Chute Waste Pile was constructed in 1981 to provide for the accumulation of cell bath waste prior to off-site disposal. This unit was certified closed with no post closure requirements by Ohio EPA in 1995.

The Burning Room thermally treated waste sodium/calcium solids for disposal of these RMI-Sodium materials. Burning of the reactive sodium/calcium sludge was accomplished in a 14 ft. by 13 ft by 11 ft. high enclosure using natural gas. This unit was certified closed with no post closure requirements by Ohio EPA on January 31, 2000.

Seven SWMUs were investigated and the findings can be found in greater detail in the *RCRA Facility Investigation Report, RMI Sodium Plant, Ashtabula, Ohio, June 1990* prepared by Eckenfelder Inc., for RMI Company. The seven SWMUs were the closed landfill (Area A), the fill area northeast of the closed landfill (Area B), the fill area northwest of the closed landfill (Area C), the former fill areas in the vicinity of the wastewater treatment ponds (Area D), the wastewater treatment ponds (Area E), the fill areas west of the wastewater treatment ponds (Area F), and the fill area north of the wastewater treatment ponds (Area G).

Materials that have been deposited at Area A and the other identified areas of the facility include cell bath waste, anode butts, and miscellaneous solid waste including electrolytic cell construction materials and salt dissolver sludge. The principal hazardous constituents associated with the site were arsenic (As), barium (Ba), cadmium (Cd), and lead (Pb). Area A (closed landfill), accepted waste until November 13, 1980. The landfill (Area A) was closed according to a closure plan submitted on August 18, 1981. Area B was in use between 1950 to 1981. Cell bath wastes and other wastes were deposited in this area. Some of the wastes were reportedly removed to the landfill in 1981 (Area A). Area C was in use between 1960 to 1981 where cell bath wastes were deposited. Some of the wastes were reportedly removed to the landfill (Area A). Area D was in use between 1950 to 1960s. This area was incorporated into Area E which became the location of the wastewater treatment ponds. This area was gradually filled with unknown waste materials to build up elevation. Area F was in use between 1966 to 1967. Cell bath waste was placed in this area to fill low areas and covered. Area G was in use between 1956 to 1976. This area was used to deposit cell bath waste, anode butts and construction debris. This area also received excavated materials and debris from the construction of wastewater ponds Nos. 2, 3, 4, 5.

A dense non-aqueous phase liquid (DNAPL) comprised of chlorinated solvents (tetrachloroethylene, trichloroethylene, 1, 1, 2, 2-tetrachloroethane) and associated dissolved constituents (trans-1, 2-dichloroethylene) were found at the southern most boundary on the RMI site. The DNAPL was observed in a sandy till zone, 17 to 25 feet below the ground surface. The sandy till zone is confined above and below by clay till with low hydraulic conductivity. The possible source of the DNAPL can be from a chemical manufacturing facility (Detrex), located off site on the southern boundary of RMI. RMI-Sodium never used chlorinated solvents at the Sodium Plant. To further substantiate this determination, it was observed that the major portion of the sandy till zone, which contains the DNAPL, is to the south of the RMI site, and the piezometric surface of the DNAPL-saturated sandy till has not been observed anywhere except the extreme southern boundary of the RMI site. Additionally, dissolved organic constituents from the DNAPL have only been observed in the immediate vicinity of the southern boundary of the RMI property. Detrex has historically discharged solvents to Fields Brook and to unlined settling lagoons on their property, as reported in the *Fields Brook Source Control Operable Unit Remedial Investigation Report* (Woodward-Clyde, 1992). This contamination is being addressed, under the Superfund program by U.S. EPA, and by Detrex, Inc., operator of the neighboring plant and member of the Fields Brook Superfund Site group of Potentially

Responsible Parties (PRPs), as stated in the *DRAFT STATEMENT OF BASIS, RMI SODIUM FACILITY, ASHTABULA, OHIO, OHD000810242*.

Footnotes:

¹ "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

² Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

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3. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential Human Receptors (Under Current Conditions)

<u>Contaminated" Media</u>	<u>Residents</u>	<u>Workers</u>	<u>Day-Care</u>	<u>Construction</u>	<u>Trespassers</u>	<u>Recreation</u>	<u>Food"</u>
Groundwater	_____	<u>No</u>	_____	<u>Yes</u>			_____
Air (indoors)	_____	_____	_____				
Soil (surface, e.g., <2 ft)	_____	<u>Yes</u>	_____	<u>Yes</u>	_____	_____	_____
Surface Water	_____	<u>Yes</u>			_____	_____	_____
Sediment	_____	<u>Yes</u>			_____	_____	_____
Soil (subsurface e.g., >2 ft)	_____			<u>Yes</u>			_____
Air (outdoors)	_____	_____	_____	_____	_____		

Instructions for Summary Exposure Pathway Evaluation Table:

- Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated") as identified in #2 above.
- enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("_____"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

_____ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

☒ If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

_____ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code

Rationale and Reference(s): RMI-Sodium Plant is a non-operational facility located in an industrial area. An office and storage building are the only structures that remain after demolition activities, which occurred in 2000. There are no residents or daycare centers located on or adjacent to the facility. No trespassers or recreational users are expected, since the property is surrounded by a fence and 24 hour security with limited access to the site. No food crops were produced or grown at this facility.

The *RCRA Facility Investigation Report (RFI)*, June 1990, which was approved by U.S. EPA, indicated that there were two water-bearing zones at the RMI site; a shallow groundwater zone within the fill and glacial till and a deep bedrock zone. The RFI concluded that the shallow ground water had been affected by RMI activities and identified

barium and cadmium as constituents of concern. The shallow ground water was characterized by a low hydraulic conductivity and a yield below that required by an average household, and therefore is not expected to serve as a source of drinking water. It was further concluded that the deep ground water zone had not been affected by plant activities. The shallow ground water may be encountered during any construction or excavation activities in the corrective action areas. Construction and site worker activities should be restricted by a Health and Safety Plan, which includes, but not limited to, chemical hazard evaluation, levels of personal protective protection, and air monitoring to limit exposures to contaminated media.

Surface and subsurface soil samples from various locations on the RMI site were collected and analyzed. Arsenic (As), barium (Ba), cadmium (Cd), chromium (Cr), lead (Pb), nickel (Ni), and selenium (Se), were found to be present at elevated concentrations in the surface soils. Subsurface soils which showed elevated concentrations were: Area D, between 3.0 and 6.5 feet for Ba, Pb, and Ni; and Area G for Pb, Cd, and Ni at depths less than 3.5 feet.

Surface water and sediment samples were collected from the wastewater treatment ponds, the french drain system, and the site drainage ditches. Barium and cadmium were found in all of the ponds, with barium being the highest in concentration in the pond water (5500 ug/l) and in the sediment (3020 mg/kg). The highest contaminant concentration found in the water of the french drain system was cadmium at 26.8 ug/l. Low level concentrations for most inorganic constituents of concern were found in the ditch samples, with cadmium being detected in the water at 37.9 ug/l.

Area A (closed landfill), accepted waste until November 13, 1980. The landfill (Area A) was closed according to a closure plan submitted on August 18, 1981. This proposal was acceptable to the Office of Land Pollution Control of Ohio EPA with minor comments and conveyed to RMI-Sodium in a letter dated August 20, 1981. As part of the landfill closure, a compacted clay cover of one and one half feet was applied over the graded fill, which was followed by a six inch topsoil cover and seeded with grass. A new layer of topsoil was placed and seeded in 1991. During the 1989 RFI, neither average surface soil nor subsurface soil concentrations were identified at levels of concern to an investigation depth of 46.7 feet.

Area E (Wastewater treatment ponds), were active wastewater treatment units operated in accordance with an NPDES permit. The sediments in these ponds were found to be non-hazardous in accordance with 40 CFR Part 261.24 and were frequently removed during their use. The pond water was discharged and regularly analyzed in accordance with their NPDES permit. During the final dredging in June 1999, the ponds were drained, sediment was removed, and the surface layer of the clay side walls and bottom was scraped off and disposed of with the sediment at an approved landfill. The ponds are currently empty except for any accumulated precipitation. These ponds are to be closed under the Division of Surface Water. RMI Titanium Co.-Sodium Plant submitted a closure plan on April 6, 2000 (PTI Application No. 02-13937). As part of the Permit To Install (PTI), the location of these ponds was to be surveyed.

³ Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

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- 4 Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be "**significant**"⁴ (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

☒ If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

☐ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway) - continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

☐ If unknown (for any complete pathway) - skip to #6 and enter "IN" status code

Rationale and Reference(s): A full quantitative human health risk assessment was performed for soils for the constituents, depths, and areas of interest (Areas B, C, F, and G). For the current scenario, the total carcinogenic risk estimates ranged from 1.5×10^{-5} (Area F) to 1.6×10^{-5} (Areas B, C, and Areas B and C combined, and G). The highest current carcinogenic risk estimates (1.6×10^{-5}) were principally driven by both the dermal contact and incidental ingestion exposure routes, of which arsenic was the sole risk contributor. The total carcinogenic risk estimate for background soil was 1.2×10^{-5} . The total noncarcinogenic hazard indices for the current scenario ranged from 0.077 (Area F) to 0.85 (Area B and Area B and C combined). The highest current hazard index (0.85) was driven by both dermal contact and incidental ingestion exposure routes, of which cadmium was the primary risk contributor. The hazard index for background soil was 0.066. Several of the risk estimates, including those for background soils which are remote from and unaffected by the solid waste management units at the RMI site, are driven mostly by the presence of arsenic and are in the range of other studies of background soils concentrations in the Fields Brook drainage basin. Under current conditions, none of the total estimated carcinogenic risks exceed U.S.EPA's acceptable range of 1×10^{-4} to 1×10^{-6} , and none of the total noncarcinogenic hazard indices were above U.S.EPA's acceptable level of 1.0. The human health and environmental risk assessment and its conclusions were accepted by U.S.EPA as part of the Corrective Measures Study, approved on September 29, 1995.

There is currently no accepted toxicity value for lead, therefore risks were not quantified for the areas of concern, including Area D, where lead was the only constituent of concern. The proposed Ohio Generic Cleanup Number of 245 mg/kg was used to evaluate the concentrations of lead in soil in the areas of interest. The only soil sample which exceeded this value was collected from Area B, 0 to 4 inches (SS3-3, 1140 mg/kg).

RMI has been named as a potentially responsible party (PRP) in the Fields Brook Superfund Site, also located in Ashtabula, Ohio. Subsequent to the submission of the Revised Final Corrective Measures Study (CMS) which was approved by U.S.EPA, RMI and other PRPs entered into an agreement with U.S.EPA Region 5 whereby an engineered landfill will be constructed on the RMI Sodium Plant property as part of the proposed remedy for the Fields Brook Superfund Site. The construction of the Engineered Landfill (under U.S.EPA supervision) began in the year 2000 and implementation of Corrective Measure Alternative 4F was initiated by way of voluntary action, coordinated through U.S.EPA. Alternative 4F consists of the excavation of Areas B, C, and G; transport and temporary stockpiling of the Area B and C excavated soil at the location west of Area A; and disposal in an on-site engineered landfill located in the vicinity of Areas B and C. Impacted soil and sediment excavated from the Fields

Brook Superfund Site will also be placed into the landfill. This alternative includes No Further Action at Areas D and F. The existing cover on Area A will be maintained under current operating and maintenance(O&M) procedures. Institutional controls will be in place for Areas A, D, F, and the New-Engineered Landfill. When the implementation of the corrective measures are complete, the erosion, runoff, and constituent migration due to infiltration and percolation should virtually be eliminated. The short and long term direct human exposure pathways will be eliminated and the indirect pathways associated with erosion/sediment transport and constituent migration will also be eliminated.

Detailed documentation on the Health and Environmental Assessment Report (HEA) and analysis of the Corrective Measures Alternatives can be found in the *Revised Final Corrective Measures Study, RMI Titanium Co.-Sodium Plant, Revised May 1995, Volume 1 & 2* and in the *Supplement To The Revised Final Corrective Measures Study, RMI Titanium Co.-Sodium Plant, Ashtabula, Ohio, OHD 000 810 242*.

⁴ If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

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5 Can the “significant” exposures (identified in #4) be shown to be within acceptable limits?

_____ If yes (all “significant” exposures have been shown to be within acceptable limits) - continue and enter “YE” after summarizing and referencing documentation justifying why all “significant” exposures to “contamination” are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

____ If no (there are current exposures that can be reasonably expected to be “unacceptable”)- continue and enter “NO” status code after providing a description of each potentially “unacceptable” exposure.

_____ If unknown (for any potentially “unacceptable” exposure) - continue and enter “IN” status code

Rationale and

[illegible]

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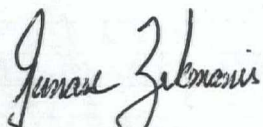
6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

☒ YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the RMI Titanium Company-Sodium Plant facility, EPA ID # OHD000810242, located at 600 East State Road, Ashtabula, Ohio under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

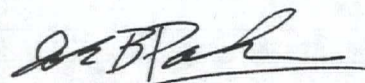
☐ NO - "Current Human Exposures" are NOT "Under Control."

☐ IN - More information is needed to make a determination.

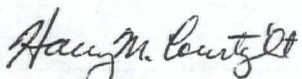
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Interim Final 2/5/99

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Current Human Exposures Under Control

Facility Name: RMI Titanium Sodium Plant
Facility Address: Ashtabula, Ohio
Facility EPA ID #: OHD 000 810 242

1. Has all available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in this EI determination?

☒ If yes - check here and continue with #2 below.

☐ If no - re-evaluate existing data, or

☐ if data are not available skip to #6 and enter "IN" (more information needed) status code.

BACKGROUND

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Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

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	<u>Yes</u>	<u>No</u>	<u>?</u>	<u>Rationale / Key Contaminants</u>
Groundwater	—	✓	—	_____
Air (indoors) ²	—	✓	—	_____
Surface Soil (e.g., <2 ft)	✓	—	—	Barium, Cadmium, Lead _____
Surface Water	—	✓	—	_____
Sediment	—	✓	—	_____
Subsurf. Soil (e.g., >2 ft)	✓	—	—	_____
Air (outdoors)	—	✓	—	_____

_____ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

✓ If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):The constituents exceed health based risk assessment calculations

Footnotes:

¹ “Contamination” and “contaminated” describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based “levels” (for the media, that identify risks within the acceptable risk range).

² Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

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3. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

<u>"Contaminated" Media</u>	Potential <u>Human Receptors</u> (Under Current Conditions)						
	<u>Residents</u>	<u>Workers</u>	<u>Day-Care</u>	<u>Construction</u>	<u>Trespassers</u>	<u>Recreation</u>	<u>Food</u> ³
<u>Groundwater</u>	—	—	—	—			—
<u>Air (indoors)</u>	—	—	—				
Soil (surface, e.g., <2 ft)	—	Yes	—	Yes	Yes	—	No
<u>Surface Water</u>	—	—			—	—	—
<u>Sediment</u>	—	—			—	—	—
Soil (subsurface e.g., >2 ft)				Yes			No
<u>Air (outdoors)</u>	—	—	—	—	—		

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated") as identified in #2 above.
2. enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("___"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

___ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

☒ If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

___ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code

Rationale and Reference(s): Levels in the soils exceed the Hazard Index, based on risk assessment

³ Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

Page 5

If yes (all “significant” exposures have been shown to be within acceptable limits) - continue and enter “YE” after summarizing and referencing documentation justifying why all “significant” exposures to “contamination” are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

_____. If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

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Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)

Page 6

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

 YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the _____ facility, EPA ID # _____, located at _____ under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

✓ NO - "Current Human Exposures" are NOT "Under Control."

 IN - More information is needed to make a determination.

Completed by

(signature)

(print) Thomas Matheson

(title) Project Manager

Date

3/17/1999

Supervisor

(signature) _____

Date

(print) _____

(title) _____

(EPA Region or State) _____

Locations where References may be found:

Region 5 File Room, in facility specific files

Contact telephone and e-mail numbers

(name) Thomas Matheson

(phone #) 312-886-7569

(e-mail) matheson.thomas@epa.gov

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action Environmental Indicator (EI) RCRIS code (CA750)

Migration of Contaminated Groundwater Under Control

Facility Name: RMI Extrusion - Sodium Plant
Facility Address: Ashtabula, Ohio
Facility EPA ID #: OHD 000 810 242

1. Has all available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in this EI determination?

☒ If yes - check here and continue with #2 below.

☐ If no - re-evaluate existing data, or

☐ if data are not available, skip to #8 and enter "IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground-water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

Page 2

 ✓ If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

_____ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

Rationale and Reference(s): Cadmium exceeded the MCL in some of the on-site shallow groundwater wells. Lead exceeded its action level in one on-site monitoring well.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

¹“Contamination” and “contaminated” describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate “levels” (appropriate for the protection of the groundwater resource and its beneficial uses).

Page 3

✓ If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"²).

_____ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"²⁾ - skip to #8 and enter "NO" status code, after providing an explanation.

Rationale and Reference(s): The extent of the shallow sand zone is limited, the contaminants are metals with a lower mobility. No off-site contamination associated with these metals have been identified during the groundwater investigation.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

2 “existing area of contaminated groundwater” is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of “contamination” that can and will be sampled/tested in the future to physically verify that all “contaminated” groundwater remains within this area, and that the further migration of “contaminated” groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

Page 4

_____ If yes - continue after identifying potentially affected surface water bodies.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

**Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)**

Page 5

5. Is the **discharge** of “contaminated” groundwater into surface water likely to be “**insignificant**” (i.e., the maximum concentration³ of each contaminant discharging into surface water is less than 10 times their appropriate groundwater “level,” and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration³ of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration³ of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations³ greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

³ As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)
Page 6

6. Can the discharge of "contaminated" groundwater into surface water be shown to be "currently acceptable" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented*)?

_____ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) providing or referencing an interim-assessment,⁵ appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

_____ If no - (the discharge of "contaminated" groundwater can not be shown to be "currently acceptable") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

_____ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s): _____

⁴ Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

⁵ The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

Migration of Contaminated Groundwater Under Control

Page 7

7. Will groundwater monitoring / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"

✓ If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

_____ If no - enter "NO" status code in #8.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s): The proposed corrective measure includes groundwater monitoring, with a requirement for additional measures if the contamination begins to migrate.

Blank lined paper with horizontal ruling lines.

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)

Page 8

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

✓ YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the RMI Extrusion-Sodium Plant facility, EPA ID # **OHD 000 810 242**, located at Ashtabula, Ohio. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

____ NO - Unacceptable migration of contaminated groundwater is observed or expected.

____ IN - More information is needed to make a determination.

Completed by

(signature)

(print) Thomas Matheson

(title) Project Manager

Date 3/17/1999

Supervisor

(signature) _____

Date _____

(print) _____

(title) _____

(EPA Region or State) _____

Locations where References may be found:

Region 5 RCRA file room in site specific documents and NEDO of OEPA.

Contact telephone and e-mail numbers

(name) Thomas Matheson

(phone #) 312-886-7569

(e-mail) matheson.thomas@epa.gov

6.1 CA 750

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)

Migration of Contaminated Groundwater Under Control

Facility Name: RMI Extrusion - Sodium Plant
Facility Address: Ashtabula, Ohio
Facility EPA ID #: OHD 000 810 242

1. Has all available relevant/significant information on known and reasonably suspected releases to the groundwater media, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

☒ If yes - check here and continue with #2 below.

☐ If no - re-evaluate existing data, or

☐ if data are not available, skip to #8 and enter "IN" (more information needed) status code.

BACKGROUND**Definition of Environmental Indicators (for the RCRA Corrective Action)**

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e.,

RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

Page 2

 ✓ If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

_____ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

Rationale and Reference(s): Cadmium exceeded the MCL in some of the on-site shallow groundwater wells. Lead exceeded its action level in one on-site monitoring well.

[illegible]

¹“Contamination” and “contaminated” describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriate “levels” (appropriate for the protection of the groundwater resource and its beneficial uses).

Page 3

✓ If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"²).

_____ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the “existing area of groundwater contamination”²⁾ - skip to #8 and enter “NO” status code, after providing an explanation.

If unknown - skip to #8 and enter "IN" status code.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines, typical of notebook paper. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

2 “existing area of contaminated groundwater” is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of “contamination” that can and will be sampled/tested in the future to physically verify that all “contaminated” groundwater remains within this area, and that the further migration of “contaminated” groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

Page 4

_____ If yes - continue after identifying potentially affected surface water bodies.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)

Page 5

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be "**insignificant**" (i.e., the maximum concentration³ of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

_____ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration³ of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

_____ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration³ of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations³ greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s): _____

³ As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

**Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)**

Page 6

6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be "**currently acceptable**" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented⁴)?

_____ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) providing or referencing an interim-assessment,⁵ appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

_____ If no - (the discharge of "contaminated" groundwater can not be shown to be "**currently acceptable**") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

_____ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s): _____

⁴ Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

⁵ The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

Page 7

✓ If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

If unknown - enter "IN" status code in #8.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.

Migration of Contaminated Groundwater Under Control
Environmental Indicator (EI) RCRIS code (CA750)

Page 8

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

☒ YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the RMI Extrusion-Sodium Plant facility, EPA ID # **OHD 000 810 242**, located at Ashtabula, Ohio. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater" This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

☐ NO - Unacceptable migration of contaminated groundwater is observed or expected.

☐ IN - More information is needed to make a determination.

Completed by

(signature)

(print) Thomas Matheson

(title) Project Manager

Date

03/17/1999
ORIGINAL SIGNED

Supervisor

(signature)

(print)

(title)

(EPA Region or State)

Date

2/07/00

Locations where References may be found:

Region 5 RCRA file room in site specific documents and NEDO of OEPA.

Contact telephone and e-mail numbers

(name) Thomas Matheson
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